No claims have been added, amended or canceled. Accordingly, this listing of claims is provided merely for the convenience of the Examiner:

Listing of Claims:

1. (Previously Presented) A system for modeling a bi-directional signal of an electric circuit, comprising:

means for maintaining a first value representing an input component of the bi-directional signal;

means for maintaining a second value representing an output component of the bi-directional signal; and

means for generating a third value based upon at least the first value and second value.

2. (Previously Presented) The system of Claim 1 wherein the means for generating a third value is further based upon resistive data.

3. (Previously Presented) The system of Claim 1 wherein the first value, second value and third value are output to a computer file.

4–7. (Canceled)

8. (Previously Presented) A method for modeling a bi-directional signal of an electric circuit, comprising:

maintaining a first value representing an input component of the bi-directional signal;

maintaining a second value representing an output component of the bi-directional signal; and

generating a third value based upon at least the first value and second value.

9. (Previously Presented) The method of Claim 8 wherein the third value is further based upon resistive data which models at least a portion of resistance coupled to a pad cell.

10. (Previously Presented) The method of Claim 8 further comprising:

specifying at least one bi-directional signal of a logic design to be simulated; and

simulating the logic design.

11–12. (Canceled)

13. (Previously Presented) A method for generating a simulation output file, comprising:

placing first data in the simulation file which represents when an input signal applied to a bi-directional pad is de-asserted; and

placing second data in the simulation file which represents when an output signal applied to the bi-directional pad is asserted.

14. (Previously Presented) The method of Claim 13 further comprising:

placing third data in the simulation file which represents when a resolved signal is asserted, the resolved signal being a combination of the input signal applied to the bi-directional pad, the output signal applied to the bi-directional pad, and a resistance value associated with the bi-directional pad.

15. (Previously Presented) A simulation model for a bi-directional pad, said simulation model being responsive to an applied stimulus and generating responses thereto, and having at least two modes of operation, where a first mode of operation provides at least two response values for the bi-directional pad, and a second mode of operation provides at least three response values for the bi-directional pad.

16. (Previously Presented) A method for operating an improved pad cell model, comprising:

maintaining a first value representing an input component of the bi-directional signal;

maintaining a second value representing an output component of the bi-directional signal; and

generating a third value based upon at least the first value and second value.

17. (Previously Presented) The method of claim 16, wherein the improved pad cell model comprises:

an input node having a value which reflects data that is supplied to the pad cell from external sources;

an output node having a value which reflects data that is supplied as output from the pad cell; and

a resolved node, coupled to the input node and output node, having a value which reflects a combination of the input node value and the output node value.